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From: Schaub, Mike
Sent: Fri 9/11/2015 7:26:32 PM
Subject: Good article on GKM spill

Please do not forward outside of EPA, this is a copyright protected article from Bloomberg…kind of long, but this gives the best summary of what happened, the history of the mine and other nearby mines, and questions about liability:

EPA Spill Raises Questions on Cleanup Costs, Responsibility

Colorado River

By Tripp Baltz

Sept. 10 — After Environmental Protection Agency investigators triggered the accidental release of 3 million gallons of mining wastewater and sediment into a river in southwest Colorado, the question arose—who, ultimately, will pay for the damage and cleanup?

As an orange-tinted plume surged forth Aug. 5 from the blown-out Gold King Mine high in the Colorado Rockies, depositing sediment in the riverbed and staining rocks and brush in mustard-colored sludge, the EPA said it took "full responsibility" for the spill into the Animas River.

"It pains me to no end to see this is happening," EPA Administrator Gina McCarthy said six days after the incident. "It is a tragic and unfortunate accident and EPA is taking responsibility to ensure that it's cleaned up."

But under the nation's Superfund law, and under other liability doctrines governed by the Clean Water Act and legal precedent, private sector entities will likely find themselves held accountable for costs and cleanup associated with the accident and its aftermath, sources told BNA.

'Any Connection.'

"Anyone who has any connection to the site is going to be a defendant under the litigation" that is likely to be filed, Brent A. Fewell, a partner at Troutman Sanders LLP in Washington, told Bloomberg BNA.

Parties with a connection or possible connection to the site include the following:

• The EPA. Soon after the spill, the EPA established a claims process for people who suffer property damage, personal injury or death from the incident. However, the agency also said it is not offering immediate reimbursements for damages from the Gold King Mine water. McCarthy said there have been no reports of human health effects from the spill.

• San Juan Corp., of Golden, Colo. As the owner/operator of the blown-out gold mine, San Juan is joint and severally liable "for the entire cleanup, no matter who else is involved," Fewell said. "EPA often goes after the deepest pockets, but it's not clear whether the owner in this case can pay for a lot of it."

• Environmental Restoration LLC of St. Louis. The largest provider of emergency response services to the EPA, ER was the on-site EPA contractor at the Gold King Mine. Under Section 107(d) of the Comprehensive Environmental Response, Compensation, and Liability Act, companies that have been contracted to perform investigation or cleanup activities at Superfund sites are protected from Superfund liability, except in cases of negligence or intentional misconduct.

• Sunnyside Gold Corp. of Denver. This is the owner of the now-shuttered Sunnyside Gold Mine and American Tunnel, which runs 500 feet under the workings of the Gold King Mine. San Juan Corp. has charged that water from Sunnyside Mine was the cause of the pressurized buildup in Gold King, a claim that Kinross Gold Corp. of Toronto, parent company of Sunnyside, rejects.

• Local Governments. Downstream communities have pointed fingers at the two local governments where the mine is located—the town of Silverton and San Juan County—for historically resisting the listing of the surrounding mining region on the National Priorities List under Superfund, which would have provided more federal funding and engagement toward cleanup of abandoned mine sites.

Plume of Waste

The EPA triggered the spill while opening the Gold King adit—the horizontal passage leading into the mine—to identify actions needed to reduce contaminant flows into Cement Creek and downstream waters. Agency investigators were removing consolidated soils and debris from earlier collapses that were blocking the adit when the blowout occurred.

The plume of waste—which contained arsenic, cadmium, mercury, lead and other heavy metals—spilled into Cement Creek in the high-altitude Eureka mining district above Silverton, Colo., then flowed into the Animas River, a gold medal trout stream that courses through southwest Colorado.

The Animas merges with the San Juan River in New Mexico, which then empties into the Colorado River at Lake Powell in Utah. On Aug. 19 the EPA declared the water quality in the rivers as having returned to "pre-incident" levels and said there was "no significant impact" to Lake Powell (161 DEN A-13, 8/20/15).

But by then, the waste and sediment had passed through three states and three Indian reservations, forcing public water supply systems as well as private water irrigation districts to close their intakes.

Private Wells

Less fortunate were owners of private wells who had no way to block water from the contaminated rivers from flowing into their supplies. County sheriffs shut down recreational use of the Animas for several days, and public access to the river was barred.

Leaders in one of the tribes, the Navajo Nation, said they plan to sue the EPA, and they advised members not to submit damage claims to the federal agency. The attorneys general of Colorado,

Utah and New Mexico also said they are mulling legal action, but will make a final decision after seeing how the EPA handles the situation.

"I would hope it will not be necessary," said Colorado Attorney General Cynthia Coffman (R), one week after the spill. "It is great to have the assurances of the Environmental Protection Agency, but it is the job of the Attorney General to hold folks accountable, and that is what I am going to do in Colorado."

Under CERCLA, the EPA has the authority to compel parties responsible for accidents, spills, and other emergency releases of pollutants and contaminants into the environment to pay for cleanup.

CERCLA Liability

CERCLA is a strict liability statute that holds potentially responsible parties (PRPs) jointly and severally liable, without regard to fault, for cleanup costs incurred in response to the release or threatened release of hazardous substances.

"You cannot touch a water source coming from a contaminated mine without becoming joint and severally liable under CERCLA for any pollution coming out of that mine," Todd Hennis, chief executive officer of San Juan Corp., told Bloomberg BNA Aug. 21. "You touch a discharge, you are touching the fly paper, whether its nine gallons a minute or 1,700 gallons a minute."

Environmental Restoration issued a statement Aug. 13 declining to offer information about what went wrong at Gold King, saying it is bound by specific contract language to keep all site matters confidential.

"We stand behind our project management team and labor force at the Silverton site," the company said.

Congressional Hearings

While no evidence has come forth that negligence or misconduct contributed to the incident, the Interior Department and the EPA Office of the Inspector General have announced they are investigating the cause of and the EPA's response to the release.

And at least four congressional committees scheduled hearings into the spill. The Senate Environment and Public Works Committee and the Senate Indian Affairs Committee have separate hearings scheduled for Sept. 16. The House Natural Resources Committee and House Oversight and Government Reform Committee have a joint hearing planned for Sept. 17.

During a Sept. 9 hearing before the House Science, Space and Technology Committee on the toxic mine spill, the EPA's top emergency response official Mathy Stanislaus acknowledged that the agency didn't anticipate a worst-case scenario involving a mine blowout in its emergency response plan to dewater the abandoned facility (175 DEN A-9, 9/10/15).

Earlier, six senators sent a letter to the EPA inspector general Aug. 19 asking questions about the spill, including whether the "EPA applied the same criteria to itself" that it would apply before approving a contractor for a similar cleanup performed by a private party.

The letter also asked whether EPA "followed its legal obligations, current policies and guidelines" in the incident. It also inquired about EPA's polices regarding indemnification of contractors and "whether indemnification has any impact on the standard of care taken during response activities."

'Appropriate Care?'

The senators—Michael Bennet (D-Colo.), Cory Gardner (R-Colo.), Orrin Hatch (R-Utah), Martin Heinrich (D-N.M.), Mike Lee (R-Utah), and Tom Udall (D- N.M.)—also asked whether the EPA "took appropriate care to determine water levels in the Gold King Mine before removing rock from the portal."

It didn't, according to the summary report of an EPA internal review issued by the agency in late August (166 DEN A-11, 8/27/15).

The rapid analysis of the Gold King Mine release, conducted by representatives of three EPA regional offices and agency headquarters, concluded that the EPA team that was on-site failed to estimate the water pressure in the mine workings, which is "believed to be the most significant factor relating to the blowout."

A work plan for the mine accounted for the possibility of pressurized mine water conditions. It also demonstrated the EPA knew about the blowout risk at Gold King at least 14 months before the incident.

Blowout Risk

"Conditions may exist that could result in a blow out of the blockages and cause a release of large volumes of contaminated mine waters and sediment from inside the mine, which contain concentrated heavy metals," according to the work plan EPA prepared in June 2014.

Drilling a hole near the adit might have revealed the amount of pressure, the internal review document said. The work plan outlined the use of a stinger, a metal pipe inserted from above the top of the mine adit front at an angle through the debris and collapse blockage into the void behind the blockage, allowing drainage and control of the mine water.

The EPA did not use the stinger or take any of the work plan's suggested steps for relieving the water pressure. It relied on other observations to determine the pressure, without actually measuring it.

Expensive, Challenging Procedure

The agency said it did so because the procedure would have been expensive and technically challenging, according to the review team. Soil and rock conditions around the mine meant the procedure would have been costly, required much more planning and would take multiple summers in the field to accomplish, according to the internal review document.

So what was the EPA doing up there in the first place?

On its website the agency says the investigation was to assess ongoing water releases from the mine, treat mine water and assess the feasibility of further mine remediation.

Gold King was discovered in 1887 and mined on and off until the mid-1900s, according to the EPA. When operations in the mine ceased, work had occurred at seven different levels through three different adits.

Also in the mid-1900s, the American Tunnel was constructed below the lowest workings of Gold King, eventually reaching the Sunnyside mine complex about two miles to the northeast, according to the review team report. During its operation, the American Tunnel effectively drained the Gold King Mine and another one, the Red and Bonita Mine, the EPA said.

Sunnyside Settlement

In May 1996, Sunnyside Gold settled a Denver court case with the Water Quality Control Division of the Colorado Department of Public Health and Environment, Bruce Stover, director of the Inactive Mine Reclamation Program in the state Division of Reclamation, Mining and Safety, Department of Natural Resources, told Bloomberg BNA Aug. 25.

The agreement allowed Sunnyside, which by then had spent millions of dollars cleaning up its operation, to close the mine and install three bulkheads at its portals, Stover said.

The bulkheads resulted in the flooding of the workings of the Sunnyside Mine, which was allowed under the agreement in exchange for the company's conducting other projects to improve water quality in the Animas basin.

After the American Tunnel was closed, the water quality in the Animas River watershed "degraded progressively due to the impact of drainage from the American Tunnel and other newly draining adits," the EPA review team said.

Superfund Assessment

In 2008, the EPA's Superfund site assessment program began investigations in Upper Cement Creek, focusing on whether the region would qualify for inclusion on the NPL. After receiving community input, the EPA postponed a decision on an NPL listing, but it continued its investigation of conditions at the site in order to understand the major sources of heavy metal contamination in the Upper Animas.

The Gold King Mine site contains mine waste dumps, draining adits and associated lands impacted by mining.

"Previous samplings on these properties and within the Site have shown that hazardous substances … or contaminants have been released and are a threat to continue to be released from the property," the agency said in May 2011.

The agency made those observations in an administrative order it issued under CERCLA, directing Hennis and San Juan Corp. to provide access to the Gold King Mine site. The EPA said it would be necessary for "employees, agents, contractors and other representatives of EPA to immediately enter the property" to conduct field inspections and investigations.

Evaluation of Waste

The investigation would include evaluating mining waste, adit discharges and related seepage in the impacted lands. The EPA and its contractors would drill holes, install monitoring wells and take other actions related to the investigation of surface or subsurface contamination, it said.

In 2014, according to the review team, the EPA planned to expose the collapsed adit at Gold King "to identify actions that may be needed to reduce contaminant loading to Cement Creek and downstream waters."

At the time, Gold King, the American Tunnel, Mogul Mine, and Red and Bonita Mine were leaking 540 gallons of mining waste per minute into Cement Creek, according to Ginny Brannon, director of the Colorado Division of Reclamation Mining & Safety.

Removal of Material

On Sept. 11, 2014, work began to remove material blocking the adit. Digging extended about 20 feet into the entrance of the mine. Work stopped when investigators observed the elevation of the adit floor was found to be six feet lower than the waste-dump surface elevation, indicating there might be water building up behind the blockage, the review said.

With that knowledge, the EPA returned to the adit in late July 2015. It installed an alternative mine drainage pipe at a deeper depth in anticipation that the adit floor was lower than drainage pipes that were installed the previous year.

Without estimating the water pressure behind the blockage, investigators began digging at the top of the adit to remove consolidated soils and debris. The goal was to find "competent bedrock" within which to anchor a support structure for the adit, the review team said.

Excavation resumed on Aug. 5. The EPA on-site coordinator observed a solid rock surface and built a ramp above the external adit blockage to remove soil from the bedrock surface. The lower portion of the bedrock face crumbled away and there was a spurt of water. Shortly thereafter, the blowout occurred.

Color of the Water

The color of the water was initially clear, but after 3 to 4 minutes it changed to "red/orange," the review said. After about an hour, the peak flow began to subside.

The on-site coordinator later speculated the digging "knocked something loose" when removing the soils from the bedrock face. The review team concluded the blowout was "likely inevitable."

The team also said actions taken by the EPA on-site coordinator to pull out the site personnel and crew from and near the adit "probably avoided any fatalities from the pressurized adit blowout."

"They're lucky no one was killed," Hennis told Bloomberg BNA. "It was not my job to oversee what they were doing. EPA took over management of the site four years ago when it forced that CERCLA access agreement on me."

No Workers Harmed

In addition to EPA personnel, state investigators and employees of ER, the EPA contractor, were on-site at the time of the blowout. No one was harmed. Brannon said the site was entirely under the jurisdiction of the EPA.

Hennis told Bloomberg BNA it has been his contention all along that the pressurized water that caused the blowout at Gold King came from the Sunnyside Mine pool. He said an EPA fact sheet about the watershed establishes there are "natural fractures" allowing water from the Sunnyside pool to flow into Gold King and Red and Bonita mines.

"The only answer here is for Kinross Gold to step up and stop the flow of Sunnyside water into

other people's mines, and to pay for the cost of treating all Sunnyside water," he said.

'Not Involved Whatsoever.'

Sunnyside Gold issued a statement Aug. 14 saying it is "not involved whatsoever" in the "very unfortunate" incident.

Sunnyside "never owned or operated Gold King and did not take part in the work being done there," the company said. "Sunnyside mine workings have no physical connection to the Gold King and such a connection never existed. Sunnyside is not the cause of the water buildup at Gold King."

The buildup may have been caused by the recent blockage at the Gold King adit, Sunnyside said. Meanwhile, the bulkheads installed by Sunnyside "are engineered concrete structures" that prevent water flow from the mine's workings into the Animas Basin, it said.

The company added it was unfortunate that Hennis "is trying to deflect responsibility" for the incident. "The spurious allegations made against Sunnyside are not based in fact," it said.

Statements 'Conjectural.'

Hennis's statements about the Sunnyside Mine pool being the source of the water are "conjectural," Stover told Bloomberg BNA.

"What most people believe is that the regional water table has refilled itself to a new level after the plugging of the American Tunnel by Kinross," he said. "Whether it's Sunnyside Mine poolwater or groundwater from the regional dome now refilling the mountain is hard to say."

Competent professionals will disagree on the source of the water, Stover said. “You can't track a molecule,” he said. “It's a difficult, tricky situation.”

Before the American Tunnel was excavated in 1959, Gold King Mine was flowing with several hundreds of gallons of water per minute, Stover said. “Where did that water come from?” he said. “They want free mine drainage and treatment in perpetuity simply because somebody mined under them?”

Tenacious Mining Waste

Contaminated water is now pouring forth from Gold King at the rate of 600 gallons per minute, Hennis said. And as the EPA works to address the spill, local governments in the region are now taking steps to confront the tenacious problem of historic mining waste.

At the end of August, the town of Silverton and San Juan County passed resolutions calling for local elected officials to begin working with partners in the Animas River Basin to secure immediate and long-term federal funding to address the issue of leaking mines in the Eureka Basin.

“We recognize that this is a regional problem and that it starts in our neighborhood,” Willy Tookey, chair of the San Juan County Commission, said in an Aug. 25 statement.

“We are determined to work collaboratively with our downstream neighbors and federal, state and local agencies to restore the water quality in the rivers and to make sure all affected communities recover from this environmental and economic catastrophe,” he said.

‘All Options on Table.’

In an Aug. 26 statement, the local governments said “all options are on the table,” including Superfund.

"We are not interested in playing the blame game," they said. "The past is the past and we all need to move forward to address the issues facing all of the communities in the Animas River Basin."

As the EPA, using federal taxpayer money, pays initial claims for damages and cleanup, the question remains as to whether private companies and individuals will face a similar obligation to pay for Gold King.

"In the private sector, if EPA were a private entity, they would be looking down the barrel of a criminal prosecution," Fewell said.

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